In the Claims

Applicant submits below a complete listing of the current claims, including marked-up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing. This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A communication device for a target integrated circuit chip having a digital processor, an on-chip emulator for controlling said digital processor and for collecting operation data from said digital processor for communicating to off-chip circuitry, and a target on-chip universal serial bus interface connected to said on-chip emulator, the communication device comprising:

an Ethernet port,

a universal serial bus port, and

a further integrated circuit chip having on-chip processing circuitry, on-chip memory circuitry, an on-chip memory interface for connection to memory in said device but external to the further integrated circuit chip, an on-chip Ethernet interface, and an on-chip universal serial bus interface, said on-chip Ethernet interface being connected to said Ethernet port, the said on-chip Ethernet and universal serial bus interfaces being connected to said processing circuitry for translating between Ethernet protocol data on an Ethernet bus connected to said Ethernet port and universal serial bus data for said target on-chip universal serial bus interface.

2. (Canceled)

3. (Currently Amended) A communication device for a target integrated circuit chip having a digital processor, an on-chip emulator for controlling said digital processor and for collecting operation data from said digital processor and for communicating to off-chip circuitry, and a target on-chip universal serial bus interface connected to said on-chip emulator, the communication ~~deice~~ device comprising:

an Ethernet port,

a universal serial bus port, and

a further integrated circuit chip having on-chip processing circuitry, on-chip memory circuitry, modem circuitry for connection of a telephone line to a universal serial bus, an on-chip Ethernet interface and an on-chip universal serial bus interface, said on-chip Ethernet interface being connected to said Ethernet port, the said on-chip Ethernet and universal serial bus interfaces being connected to said processing circuitry for translating between Ethernet protocol data on an Ethernet bus connected to said Ethernet port and universal serial bus data for said target on-chip universal serial bus interface.

4. (Original) The device of claim 3, wherein said modem circuitry comprises a soft modem.

5. (Original) The device of claim 3, wherein said modem circuitry comprises a hard modem.

6. (Currently Amended) A combination of a communication device and a target integrated circuit chip, said target integrated circuit chip having a digital processor, an on-chip emulator for controlling said digital processor and for collecting operation data from said digital processor for communicating to off-chip circuitry, and a target on-chip universal serial bus interface connected to said on-chip emulator, the communication device comprising:

an Ethernet port for connection to said off-chip circuitry,

a universal serial bus port, and

a further integrated circuit chip having on-chip processing circuitry, on-chip memory circuitry, an on-chip Ethernet interface and an on-chip universal serial bus interface, said on-chip Ethernet interface being connected to said Ethernet port, the said on-chip Ethernet and universal serial bus interfaces being connected to said processing circuitry for translating between Ethernet protocol data on an Ethernet bus connected to said Ethernet port and universal serial bus data for said target on-chip universal serial bus interface, wherein the on-chip emulator is connected to the communication device via a universal serial bus.

7. (Original) The combination of claim 6 further comprising modem circuitry for connection of a telephone line to said processing circuitry of said communication device.

8. (Original) A method of communicating with a target integrated circuit chip having a digital processor, an on-chip emulator for controlling said digital processor and for collecting operation data from said digital processor for communicating to off-chip circuitry, and a target on-chip universal serial bus interface connected to said on-chip emulator, the method comprising:

supplying data from said off-chip circuitry via an Ethernet bus to an Ethernet port of a communication device comprising a further integrated circuit chip having on-chip Ethernet interface circuitry and on-chip processing circuitry;

passing said data as an input said Ethernet interface circuitry;

in said Ethernet interface circuitry, translating said data into a form suitable for said on-chip processing circuitry;

supplying said translated data to said on-chip processing circuitry;

processing said translated data to provide output data;

applying said output data to an on-chip universal serial bus interface, for transfer via a universal serial bus to said on-chip emulator of said target integrated circuit chip.

9. (Previously Presented) A method of debugging a target integrated circuit chip using a host computer device, said target integrated circuit having a digital processor and an on-chip emulator wherein said on-chip emulator is operable to control said digital processor according to a host program and to collect operation data from said digital processor for communicating to said host, said chip comprising a target on-chip universal serial bus interface connected to said on-chip emulator, the method comprising

providing a communication device comprising an Ethernet port, a universal serial bus port and a further integrated circuit chip having on-chip processing circuitry, on-chip memory circuitry, an on-chip Ethernet interface and an on-chip universal serial bus interface,

connecting said Ethernet port to said host via an Ethernet link;

connecting said communication device to said target on-chip universal serial bus interface and said on-chip emulator via a universal serial bus;

communicating data between said on-chip emulator and said on-chip processing circuitry;

processing data in said on-chip processing circuitry to provide output data; and

supplying said output data to said host via said Ethernet port.

10. (Original) The method of claim 9 and further comprising loading a program from said host to said on-chip processing circuitry over said Ethernet link.

11. (Currently Amended) A method of debugging a target integrated circuit chip having a digital processor and an on-chip emulator wherein said on-chip emulator is operable to control said digital processor and to collect operation data from said digital processor for communicating to a host, said chip comprising a target on-chip universal serial bus interface connected to said on-chip emulator, the method comprising

providing a communication device comprising an Ethernet port, a universal serial bus port and a further integrated circuit chip having on-chip processing circuitry, on-chip memory circuitry, an on-chip Ethernet interface and an on-chip universal serial bus interface,

connecting said Ethernet port to said host;

connecting said communication device to said target on-chip universal serial bus interface and said on-chip emulator via a universal serial bus;

communicating data between said on-chip emulator and said on-chip processing circuitry;

processing said data in said on-chip processing circuitry to provide output data;

supplying said output data to said on-chip emulator ~~circuitry~~.

12. (Original) The method of claim 9 comprising running an embedded web-server process on said on-chip processing circuitry.